KUROCHKIN, S.S.; BELOV, A.F.; BELOUS, A.L.; SALICHKO, V.N.; ABUZINA, I.L.; KURKOV, Ye.V.; KUZNETSOV, K.F.; STERLIGOV, D.A.

Principle transistorized components of multichannel measuring systems. Mnogokan. izm. sist. v iad. fiz. no.5:87-116 '63. (MIRA 16:12)

ACCESSION NR: AR4032161 S/0058/64/000/002/A019/A019

SOURCE: Ref. zh. Fiz., Abs. 2A192

AUTHORS: Krashenninikov, I. S.; Kurochkin, S. S.; Shalgin, Yu. M.; Sterligov, D. A.

TITLE: System for centralized control of statistical parameters

CITED SOURCE: Tr. 5-y Nauchno-tekhn. konferentsii po yadern. radioelektronike. T. 2. Ch. 2. M., Gosatomizdat, 1963, 123-134

TOPIC TAGS: statistical parameter, centralized control, multiple pickup monitor, pickup intensity deviation identification, magnetic drum memory, two level recording, multichannel control, dosimetric control

TRANSLATION: The operation of a system for centralized control of a large number of objects of the same type is analyzed. The control

Card 1/2

ACCESSION NR: AR4032161

parameter is the intensity of pulses from pickups, which number 600 in this case. The system registers deviations of the monitored intensities from normal and records the number of the pickup in which this deviation takes place. The period of scanning the monitored objects is 30 minutes. The system is suitable for an average pickup pulse intensity ~100 pulses/sec. The number of pickups which are read simultaneously is 256. Access to any one group of pickups is by applying the supply voltage to their electrodes. The main block of the control system is a magnetic drum memory unit capable of storing 50,000 bits of information. The drum has 80 tracks and recording is at two levels with a 30 kcs timing frequency. The block diagrams of the main units are given. The use of the system for multichannel control (for example, dosimetric control) can increase the control accuracy and decrease the quantity of electronic equipment per control point. Yu. Semenov.

DATE ACQ: 31Mar64 SUB CODE: SD, PH ENCL: 00

Card 2/2

ACC NR: AR6016152 SOURCE CODE: UR/0058/65/000/011/A026/A026

AUTHOR: Belov, A. F.; Kurochkin, S. S.; Stergilov, D. A.

TITLE: Matrix-type control devices for multichannel analyzers 10

SOURCE: Ref. zh. Fizika, Abs. 11A273

REF SOURCE: Tr. Soyuzn. n.-i. in-ta priborostr., vyp. 1, 1964, 131-142

TOPIC TAGS: pulse analyzer, measuring apparatus, control circuit, computer logic, computer program/ BUU-16 pulse analyzer, BUU-17 pulse analyzer

ABSTRACT: The authors analyze variants of control circuits for multiplechannel measuring systems: linear, decoding, and matrix types. It is concluded that in the presently developed analyzers it is advantageous to use a control device of the matrix type (when the number of command steps exceeds 16). Two types of control devices, BUU-16 and BUU-17, are described in detail, and their schematic diagrams are presented together with their basic data. The operation of the individual units is considered, such as the shaping amplifier with an OR logical circuit or without it, the address-current generator, and the program transfer switch. Results of tests and operation of the control devices of the matrix type are presented. It is noted that the type of control device under consideration was realized in the following analyzers: AI-1024-1, AI-1024-2, AI-2048, etc. N. P. [Translation of abstract]

SUB CODE: 09

Card 1/1

BELOV, A.F.; STERLIGOV, D.A.

Adjustment and control of programming devices of multichannel measuring systems. Nauch.-tekh. sbor. Gos. i dorozh. lit. v obl. atom. nauki i tekh. no.6:105-113 '63 (MIRA 17:8)

L 38716-66 EWT(d)/EWT(l)/EWP(l) LJP(c) BC

ACC NR: AR6014198 SOURCE CODE: UR/0271/65/000/011/B027/B028

AUTHOR: Belov, A. F.; Kurochkin, S. S.; Sterligov, D. A.

TITLE: Matrix control devices for multichannel analyzers

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 11B228

REF SOURCE: Tr. Soyuzn. n.-i. in-ta priborostr., vyp. 1, 1964, 131-142

TOPIC TAGS: multichannel analyzer, matrix control, digital computer, computer component

ABSTRACT: Linear, decoder, and matrix control devices for multichannel measuring systems are analyzed. It is inferred that the matrix type (when the number of command cycles exceeds 16) is expedient for use in new analyzers. Two control devices, BUU-16 and BUU-17, are detailed, their functional diagrams are presented as well as their basic data. Operation of these units is examined: a shaping amplifier with or without an OR-gate; address-current generator with a program switch. Tests and operating-experience results are reported. The above control device was physically implemented in AI-1024-1, AI-1024-2, and AI-2048 analyzers. Nine figures. Bibliography of 4 titles. N. P. [Translation of abstract]

SUB CODE: 09

Card 1/1 UDC: 681.142.34

KUZ'MINA, N.G.; FEOKTISTOV, V.N.; MATVEYEV, V.V.; STERLIGOV, I.N.; RYVKIN, S.B.

New developments in testing oil cloth and bookbinding materials. Kozh.-obuv.prom. no.12:19-23 D '59. (MIRA 13:5)

(Leather substitutes--Testing)

LUZHNYKH, L.A.; STERLIGOV, I.N.; YEVSYUKOV, P., red.; PORTYANSKIY, B., red. izd-va; BARSKAYA, Ia., tekhn. red.

[Automation; collection of articles in English] Avtomatika; sbornik tekstov na agliiskom iazyke. Podbor tekstov, kommentarii i slovar' L.A.Luzhnykh i I.N.Sterligova. Moskva, Izd-vo lit-ry na inostr. iazykakh, 1961. 129 p. (MIRA 14:7)
(Automation)

L 38364-66 EWT(m)/EWP(v)/EWP(j)/T IJP(c) WW/RM SOURCE CODE: UR/0323/66/000/001/0054/0057

ACC NR: AP6019946 (A) 38 B

AUTHOR: Protasov, V. G. (Engr.); Baramboym, N. K. (Prof.; Dr. of Chemical Sciences); Baranova, L. P. (Engr.); Sterligov, I. N. (Engr.)

ORG: Physical and Colloidal Chemistry Department, Moscow Technological Institute of the Light Industry (Kafedra fizicheskoy i kolloidnoy khimii Moskovskogo tekhnologicheskogo instituta legkoy promyshlennosti)

TITLE: Study of adhesives based on modified polyethylene

SOURCE: IVUZ. Tekhnologiya legkoy promyshlennosti, no. 1, 1966, 54-57

TOPIC TAGS: adhesive, polyethylene plastic, footgear, polypropylene plastic, maleic anhydride

ABSTRACT: The possibility of using modified polyethylene as an adhesive for bonding footwear and sewing materials was investigated. The mechanochemical modification of polyethylene involved the use of a laboratory extruder; maleic anhydride (MA) was introduced to increase the polarity, and atactic polypropylene (APP) was added as a plasticizer. The properties of the adhesives were tested by bonding footwear and sewing materials in various combinations. Adhesive bonds in footwear materials were tested for ply separation, and in sewing materials, for ply separation and shear. It was found that as the atactic polypropylene content of polyethylene rises, the

Card 1/2

L 35364-66

ACC NR: AP6019946

O

resistance to ply separation increases; this is attributed to the plasticizing effect of APP. The addition of MA to the adhesive composition increases the adhesive strength by increasing the polarity of polyethylene and atactic polypropylene (by forming carboxyl groups). It is concluded that the use of modified polyethylene offers attractive new prospects for the production of inexpensive and efficient adhesives for the footwear and clothing industry. Orig. art. has: 2 figures and 2 tables.

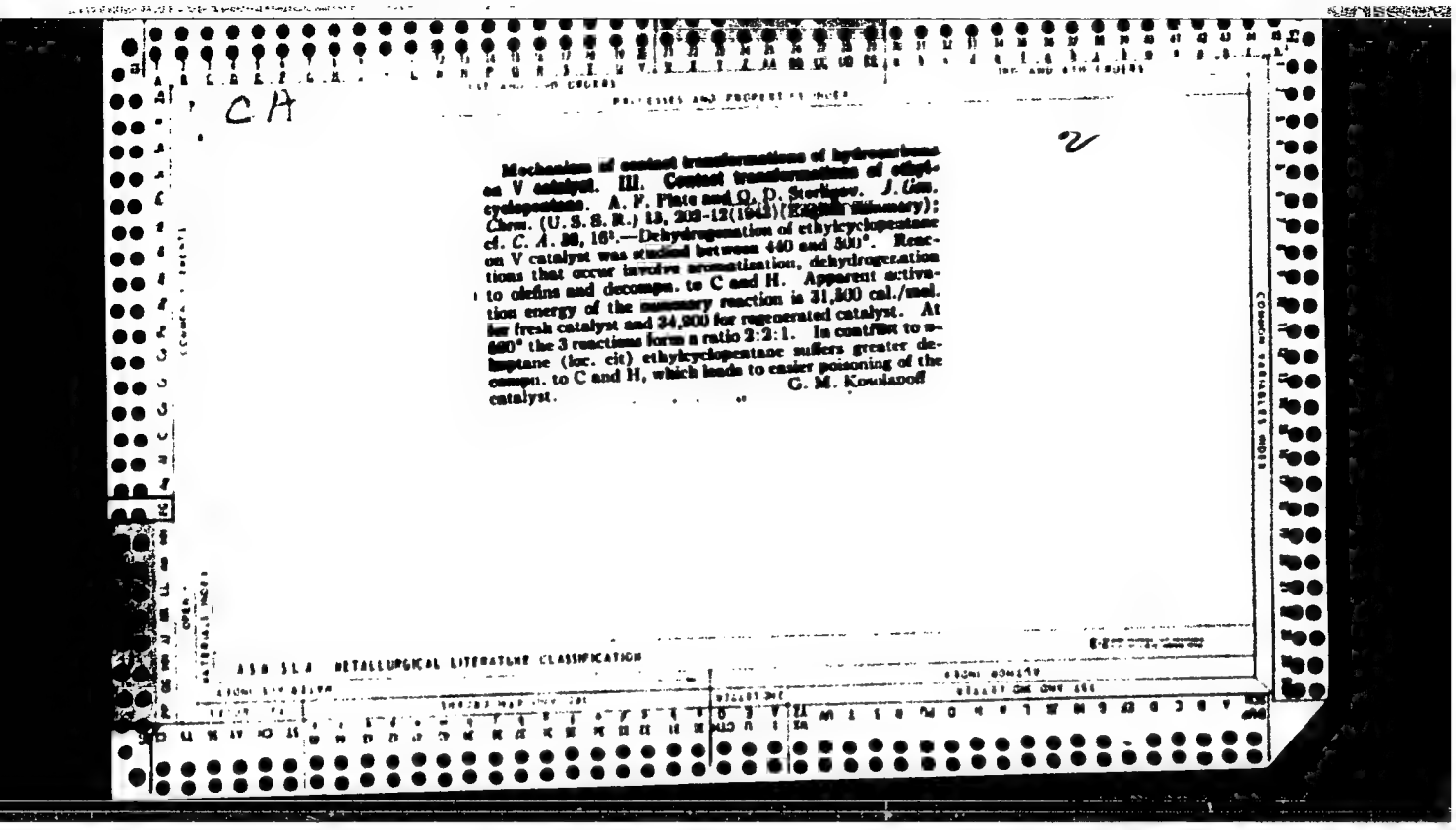
SUB CODE: 11/ SUBM DATE: 20Aug65/ ORIG REF: 004/

Card 2/2 vmb

STERLIGOV, O. D.

"The effect of the diameter of Laboratory columns with fenske pacing on their efficiency and productivity"., Kasansky, B. A., Liberman, A. L. and Sterligov, O. D. (p. 130)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1943, Volume 13, no. 3.



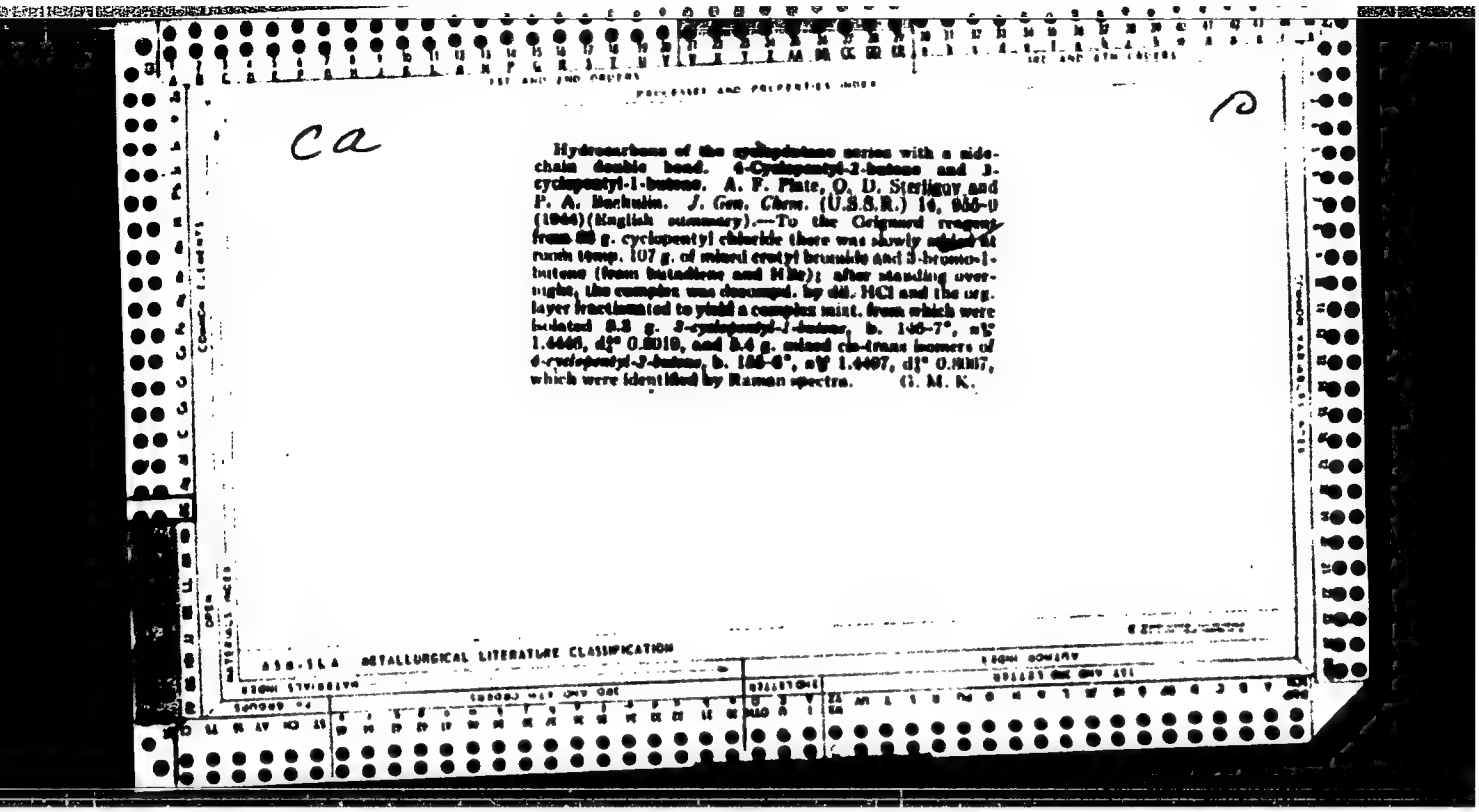
CA

V

Mechanism of contact transformations of hydrocarbons on V catalyst. III. Contact transformations of ethylcyclopentane. A. F. Plate and O. D. Sterligov. *J. Gen. Chem.* (U. S. S. R.) 13, 203-12(1943)(English summary); cf. *C. A.* 36, 161.—Dehydrogenation of ethylcyclopentane on V catalyst was studied between 440 and 510°. Reactions that occur involve aromatization, dehydrogenation to olefins and decompn. to C and H. Apparent activation energy of the aromatiz reaction is 31,300 cal./mol. for fresh catalyst and 24,900 for regenerated catalyst. At 480° the 3 reactions form a ratio 2:2:1. In contrast to n-heptane (loc. cit) ethylcyclopentane suffers greater decompn. to C and H, which leads to easier poisoning of the catalyst.

G. M. Kosolapoff

ASB SLA METALLURGICAL LITERATURE CLASSIFICATION



ca

Hydrocarbons of the cyclopentane series with a side-chain double bond. 4-Cyclopentyl-2-butene and 3-cyclopentyl-1-butene. A. F. Plate, O. D. Sterligov and P. A. Bachukin. *J. Gen. Chem.* (U.S.S.R.) 16, 955-9 (1946)(English summary).—To the Grignard reagent from 68 g. cyclopentyl chloride there was slowly added at room temp. 107 g. of mixed crotyl bromide and 3-bromo-1-butene (from butadiene and HBr); after standing overnight, the complex was decomposed by dil. HCl and the org. layer fractionated to yield a complex mixt. from which were isolated 8.3 g. 3-cyclopentyl-1-butene, b. 146-7°, n_D^{25} 1.4440, d_4^{25} 0.8019, and 3.4 g. mixed cis-trans isomers of 4-cyclopentyl-2-butene, b. 155-6°, n_D^{25} 1.4467, d_4^{25} 0.8317, which were identified by Raman spectra. (I. M. K.

A56-15A METALLURGICAL LITERATURE CLASSIFICATION

STURLIDOV, G. E.

"Catalytic Aromatization of Individual Hydrocarbons Over Molybdenum Catalysts." Sub 5 Apr 51, Inst of Organic Chemistry, Acad Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

ST[illegible], G. L.

USSR/Chemistry - Hydrocarbons
Isotopes

Aug 52

"Hydrogen Exchange in Saturated Hydrocarbons Resulting From the Action of Sulfuric Acid," V. I. Feshin, B. V. Ilinskiy, G. D.Sterlinov, and A. I. Liberman, Inst of Phys Chem Acad Sci USSR

"Zh Fiz Khim" Vol 26, No 8, pp 1081-1084

The exchange of hydrogen of hydrocarbons was studied with the aid of sulfuric acid having a high content of heavy H. It was found that the reaction passes through the following stages. Radicals or carbonium ions are formed by oxidation. They are capable of exchanging hydrogen atoms for deuterium. H exchange continues from one radical to the next in a chain of reactions. The final stage is breaking off of the chain taking place in the usual manner. Submitted by Acad V. A. Kargin 3 Jun 52

PA 63T16

STERLIGOV, O.D.

USSR

Hydrogen exchange of saturated hydrocarbons in reaction with sulfuric acid. D. N. Kursanov, V. N. Setkina, and O. D. Sterligov. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* [illegible] (Engl. translation).—See *C.A.* 49, 2290h.

H. L. H.

Sterligov, O. D.

Hydrogen exchange of saturated hydrocarbons in reaction with sulfuric acid. D. N. Kursanov, V. N. Setkina, and O. D. Sterligov (Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1953, 1035–42.—Exchange of H atoms was studied in *n*-C_5H_{12}, *n*-C_6H_{14}, $MeCHEt_2$, $PrCHMeEt$, $BuCMe_3$, Me_2CHCMe_3, and $Me_2CHCH_2CMe_3$ in contact with D-enriched H_2SO_4. H—D exchange takes place only with those hydrocarbons that contain a tertiary C atom and the exchange equil. is attained at 20–5° within a few hrs. H atoms in satd. alicyclic compds. which contain a tertiary-C atom are also readily exchanged for D. G. M. Kosolapoff

British Abst.
A I
Aug. 1953
Chemical Equilibria and Kinetics

Effect of force of compression on activity and structure of alumino-molybdenum catalysts. O. D. Sterligov, M. Goniberg, A. M. Rubinshtein, and B. A. Kazanskii (*Izvestia*, 1953, No. 1, 28–36).—The effect of force of compression on structure, catalytic efficiency, sp. activity, and stability of catalyst is investigated. Full experimental details are given. Catalyst containing ~20% MoO_3, compressed into granules (1·5—3·0 mm.) at pressures from 2000—20,000 atm. is used in the dehydrocyclisation of n-C_7H_{16} and dehydrogenation of cyclopentane at 490°. Activity of catalyst is determined from rate of conversion of starting hydrocarbons into aromatics. In range of pressure from 2000—20,000 atm. results in increases of catalytic efficiency and stability, and a decrease of sp. activity, probably due to a change of porosity in the case of the latter. A plot of log of sp. activity, s, against time, τ, gives straight line, i.e., $\log s = \log s_0 - \alpha\tau$. Where: s_0 sp. activity at $\tau = 0$; α coeff. of rate of fall of sp. activity; and $1/\alpha = \beta$ is coeff. of stability. X-Ray investigation showed no change in primary crystal structure.

W. MANZ.

STERLIGOV, O.D.

1256. Dispersion methods of determining aromatic hydrocarbons in mixtures with hydrocarbons of other classes. Analysis of mixtures not containing unsaturated compounds. B. A. Kazansky, M. I. Rozengart, O. D. Sterligov and G. A. Tarasova (*J. Anal. Chem. U.S.S.R.*, 1953, 8 [5], 245–252).—Several dispersion methods of determining aromatic hydrocarbons in mixtures with other hydrocarbons are discussed, and a method not requiring determinations of sp. gr. or correction for non-additivity is recommended. The calculation with binary mixtures is made by means of the formula—

$$\omega_R = \left[\left(\frac{n^2_F - 1}{n^2_F + 2} - \frac{n^2_C - 1}{n^2_C + 2}\right)\Big/(n_D - 1)\right] \times 10^4$$

where ω_R is the relative dispersion, and n_F, n_C and n_D are the refractive indices for the H lines F and C, and the Na line D. G. S. SMITH

By-products in the Sandmeyer reaction. A. L. Liberman, O. D. Sterligov, T. V. Lapshina, and B. A. Kazanskii (Inst. Org. Chem., Acad. Sci., U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 91, 845–8(1953).—While it is generally assumed that in the Sandmeyer reaction the halogen enters the position previously occupied by the diazonium group, this is not necessarily the case. When extremely pure o-$MeC_6H_4NH_2$ was converted to the Br analog by the Sandmeyer reaction, and the by-product mixt. was carefully examd., it was found that the material isolated from the main product by means of H_2SO_4 and NaOH (yielding not pure o-MeC_6H_3OH but an equimolar mixt. of this with 5,2-*Br(HO)C₆H₃Me* (I) (each in 13% yield). When pure o-cresol was treated with concd. HBr and $NaNO_2$ under the conditions used in a Sandmeyer reaction the above mixt. was obtained in 74% yield, thus affording a halogenation method for phenols. The Cu_2Br_2 was not essential to this reaction and the same product formed in the absence, in even higher yield. Thus $NaNO_2$ can be used in concd. HBr soln. as an oxidizing agent for bromination by nascent Br. o-$MeC_6H_4NH_2$ was purified through the acetyl to a constant f.p. (cooling curve of the product is [illegible]). The free amine, freed by hydrolysis with 20% H_2SO_4, was then diazotized in 102-g. portions in 48% HBr according to Sandmeyer and the product steam-distd., yielding, after the usual treatment, 48% o-$MeC_6H_3Br_2$. Recovery of the org. material from the washings (NaOH) gave o-MeC_6H_4OH, identified by several derivs. The residue after its distn. solidified and was purified by crystn. from H_2O, yielding I, m. 64.7–5.8°; benzoate, m. 65.0–6.4°. In a quant. expt., 108.4 g. o-$MeC_6H_4NH_2$ in 470 ml. 47% HBr was diazotized with 77.6 g. dry $NaNO_2$, the diazonium salt decompd. by 29 g. Cu_2Br_2 and 1 g. Cu, and the mixt. distd. with steam, yielding 78.6 g. o-$MeC_6H_3Br_2$ from the fore-run of the distn.; the alk. washes gave 13.6 g. o-cresol and 24.7 g. bromocresol, identical with I, b_{15} 131–3°, m. 64.2–4.4°. To 108.1 g. o-cresol in 470 ml. 47% HBr chilled to 0° was added slowly 77.6 g. $NaNO_2$ with shaking, then 29 g. Cu_2Br_2 and 1 g. Cu shavings, the mixt. warmed to 40–5°; the product steam-distd., the distillate extd. with Et_2O, and the ext. distd., giving 59% I. When Cu_2Br_2-Cu was omitted, the yield rose to 74%. To 92 g. MePh in 470 ml. 47% HBr was slowly added over 1 hr. at 0° 77.6 g. $NaNO_2$, the mixt. warmed 1 hr. to 35–42°, cooled, and the upper layer sepd.; distn. gave 13% BrC_6H_4Me (isomer not identified), b_{18} 180–3.5°, n_D^{25} 1.5532, d_4^{25} 1.4015. G. M. K.

STERLIGOV, O.D.

6

2125. On the paper by B. V. Ioffe: "Additivity of refraction dispersion and comparative evaluation of dispersiometric methods of determining aromatic hydrocarbons." B. A. Kazansky, M. I. Rosengart, O. D. Sterligov and G. A. Tarasova (*J. Anal. Chem., U.S.S.R.*, 1954, 9 [2], 116–119).—A reply to the objections of Ioffe (*Anal. Abstr.*, 1954, 1, 2125) to the paper by Kazansky, *et al.* (*Anal. Abstr.*, 1954, 1, 1286).

G. S. SMITH

STERLIGOV, O.D.

USSR

Additivity of refractional dispersion and comparative evaluation of dispersimetric methods for determination of aromatic hydrocarbons. B. A. Kazanskiĭ, M. I. Rozengart, O. D. Sterligov, and G. A. Tarasova. *J. Anal. Chem. U.S.S.R.* 9, 181–4(1954)(Engl. translation).—See *C.A.* 48, 6916b. H. L. H.

Sterligov, O.D.

USSR/ Chemistry - Analytical chemistry

Card 1/1 Pub. 22 - 32/63

Authors : Setkina, V. N.; Plate, A. F.; Sterligov, O. D.; and Kursanov, D. N., Memb. Corres. of Acad. of Sc. USSR

Title : Possibility of adapting the hydrogen exchange reaction for the analysis of saturated hydrocarbon mixtures

Periodical : Dok. AN SSSR 99/6, 1007-1010, Dec 21, 1954

Abstract : The characteristics of hydrogen exchange reaction and the possibility of applying this reaction for analytical purposes were investigated. A compulsory condition for the adaption of the hydrogen exchange reaction for the analysis of saturated hydrocarbon mixtures was found to be the attainment of reaction equilibrium. It was established that the hydrogen exchange reaction of aliphatic and alicyclic hydrocarbon mixtures containing from 5 to 7 carbon atoms in the molecule begins within a period of 10 - 20 hrs. The results, obtained during the reaction of two-component saturated hydrocarbon mixtures, are tabulated. Nine USSR references (1935-1954). Tables.

Institution: .....

Submitted: June 18, 1954

STERLIGOV, O.D.

MARKOVNIKOV, V.V.; PLATE, A.F., doktor khimicheskikh nauk, redaktor; BYKOV, G.V., kandidat khimicheskikh nauk, redaktor; PETROVSKIY, I.B., akademik, redaktor; BYKOV, K.M., akademik, redaktor; KAZANSKIY, B.A., akademik, redaktor; SHMIDT, O.Yu., akademik, redaktor; ANDREYEV, N.N. akademik, redaktor; SHCHERBAKOV, D.I., akademik, redaktor; YUDIN, P.F., akademik, redaktor; DELONE, B.N., redaktor KOSHTOYANTS, Kh. S., redaktor; SAMARIN, A.M., redaktor, LEBEDEV, D.M., professor, redaktor; FIGUROVSKIY, N.A., professor, redaktor; KUZNETSOV, I.V., kandidat filologicheskikh nauk, redaktor; STERLIGOV, O.D., redaktor; ZEMLYAKOVA, T.A., tekhnicheskiy redaktor

[Selected works] Izbrannye trudy. Redaktsiia, stat'i i primechaniia A.F. Plate i G.V. Bykova, Moskva, Izd-vo Akademii nauk SSSR 1955. 926 p. (MLRA 8:10)

1. Chlen-korrespondent AN SSSR (for Delone, Koshtoyants, Samarin) (Chemistry) (Markovnikov, Vladimir Vasil'evich 1837-1904)

STERLIGOV, O. D.

62-11-20/29

AUTHORS: Kazanskiy, B. A., Sterligov, O. D., Belen'kaya, A. P., Kondrat'yeva, G. Ya., Pavlova, P. S.

TITLE: Determination of the Unsaturation of Isopentane-Isoprene-Isoamylene Mixtures According to Bromometric Methods. (Opredeleniye nepredel'nosti izopentan-izopren-izoamilenovykh smesey bromometricheskimi metodami).

PERIODICAL: Izvestiya AN SSSR, Otdelenie Khimicheskikh Nauk, 1957, Nr 11, pp. 1399-1400 (USSR)

ABSTRACT: Here a relative evaluation of the exactness of the methods of bromometrical determination of the unsaturation and the selection of the most useful method for the analysis of the isopentane-dehydration catalysates is brought. Examining the bromometric methods of K. W. Rosenmund (reference 1), G. D. Gal'pern (reference 2) and Virabyants with artificial mixtures showed that in dependence of the composition of the isopentane-isoprene-isoamylene mixtures the exactness of the determination of the total unsaturation according to the methods of Rosenmund and Gal'pern can vary absolutely from 1 to 3 %. When introducing correcting coefficients the

Card 1/2

Determination of the Unsaturation of Isopentane-Isoprene-Isoamylene Mixtures According to Bromometric Methods. 62-11-20/29

exactness of the determination can be raised to ± 1 %. Virabyants' method is useless for these mixtures. It is shown that under the conditions for the bromination, which were investigated, the 2-methylbutene-1 binds more than one bromine molecule. There are 4 tables, and 3 references, 1 of which is Slavic.

ASSOCIATION: Institute for Organic Chemistry imeni N. D. Zelinskiy of the AN USSR (Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR).

SUBMITTED: July 5, 1957.

AVAILABLE: Library of Congress

Card 2/2

TETLIGOV

AUTHORS: Kazanskiy, B. A., Member of the AN USSR, Marushkin, M. N. (Deceased), Sterligov, O. D., and Belen'kaya, A. P. 20-4-20/52

TITLE: The Catalytic Dehydrogenation of Isopentane (Kataliticheskaya degidrogenizatsiya izopentana)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 4, pp. 619-622 (USSR)

ABSTRACT: From the economical point of view the use of isopentane is important for the increased supply of raw materials to the production of synthetic caoutchouc. The catalytic dehydration of isopentane to iso-amylenes and of these to isopren ($C_5H_{12} \rightarrow C_5H_{10} \rightarrow C_5H_8$) can be one of the ways of producing isopren. There is only little literature on this subject (references 1 - 3). So the investigation of this reaction is still very young. The second author produced at the institute (see "Association") an active alumochrome catalyzer for the dehydration of n-butane and propane which can be employed for the purpose discussed here. It consists of (in molar-%): Al_2O_3 88, Cr_2O_3 9, K_2O 3. The method of the dehydrogenation of isopentane is described. In the condensate (by means of dry ice) the total unsaturatedness was determined

Card 1/3

bromometrically according to Rosenmund (reference). The proportion of isopren as to weight was determined by reaction with maleic aldehyde. The activity of the catalyzer is increased when the temperature rises. It reaches its highest stage at 550°. The productivity is rapidly increased when the reaction temperature and the supply of raw materials are increased. At 575° the productivity of the catalyzer decreases (figure 3) as well as its selectivity as a result of the increasing cracking reaction (figure 1). At the optimal temperature of 550° stability, degree of contamination, and the most profitable duration of the working cycle were stated. The average activity (productivity) per cycle decreases with the extension of the cycle. Figure 4 shows that the selectivity is independent of the degree of contamination. When the working period lasts for more than 8 hours without interruption the degree of dehydration falls to almost 1/3 during the first 4 hours and then remains so without noticeable changes. After the regeneration the catalyzer completely reaches its initial activity. The contamination is obviously connected with the disturbance of the catalyzer by deposits of "coke". When the temperature rises from 500° to 550° the proportion of total unsaturatedness almost trbles. The concentration of isopren increases tenfold, the concentration of

The Catalytic Dehydrogenation of Isopentane. 20-[illegible]-20/52

2-methylbutene-2 almost doubles, of 2-methylbutene-1 trebles whilst the proportion of 3-methylbutene-1 hardly changes. Within the range of these temperatures 2-methylbutene-2 and 2-methylbutene-1 prevail whilst the other two substances are contained in small quantities only. Table 2 shows that one has to be careful in employing the spectrums of the dispersion of light combinations to the analysis of the substances discussed here, as the lines of isopren and 3-methylbutene-1 overlap. With small proportions of isopren already line 1640 cm^{-1} (of 3-methylbutene-1) but also line 1651 cm^{-1} (of 2-methylbutene-1) which leads to sharply increased results for the last two. There are 4 figures, 2 tables, and 4 references, 3 of which are Slavic.

ASSOCIATION: Institute for Organic Chemistry imeni N. D. Zelinskiy of the AN USSR (Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR)

SUBMITTED: July 22, 1957

AVAILABLE: Library of Congress

Card 3/3

AUTHORS: Kazanskiy, B. A., Sterligov, O. D., 75-1-23/26
Belen'kaya, A. P., Kondrat'yeva, G. Ya., Pavlova, P. S.

TITLE: Bromometric Methods of Determining Unsaturated Hydrocarbons in Isopentane-Isoprene-Isoamylene Mixtures (Opredeleniye nepredel'nosti izopentan - izopren - izoamilenovykh smesey bromometricheskimi metodami)

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1958, Vol 13, Nr 1, pp 134-141, (USSR)

ABSTRACT: In the catalytic dehydrogenation of isopentane a mixture of 5 components forms - the initial product, 3 isopentenes and isoprene. The quantitative relation of the components depends on the reaction conditions. In the present paper the reliability of the three bromimetric methods - according to Rosenmund (Reference 3), Gal'pern (Reference 5) and Vyrabiants (Reference 6) is examined. This control was investigated in pure C_5-hydrocarbons and also in various artificial mixtures of isopentane with isopentenes and isoprene which differed in the number of components and also in their concentration. It became evident that the method according to Vyrabiants is not

Card 1/5

Bromometric Methods of Determining Unsaturated Hydrocarbons in Isopentane-Isoprene-Isoamylene Mixtures

suitable for an analysis of such mixtures, because the error assumes different values and attains up to 7 - 8 % (absolute). The results obtained according to Rosenmund and Gal'pern confirm the fact that the accuracy of the determination of double bonds depends on the structure of the hydrocarbons and on the composition of the mixture: 2-methyl-butene(2) and 3-methyl-butene(1) without difficulty absorb 1 bromine molecule on bromination. 2-methyl-butene(1) and isoprene consume more than 1 bromine molecule and therefore yield too high results, relative to a double bond, in the determination according to Rosenmund and Gal'pern. The analysis of mixtures with 3 or 4 components, but without isoprene, showed an average absolute error of the determination of the olefines of $\pm$ 1 %. On addition of isoprene to the mixtures with 3 components the absolute error increases to $\pm$ 3 %. The analysis of mixtures with 5 components showed that the absolute error in the case of an isoprene content up to 20 % in the method according to Rosenmund on the average amounts to + 3 % and according to the method by Gal'pern -2 %. As the average error in the

Bromometric Methods of Determining Unsaturated Hydrocarbons in Isopentane-Isoprene-Isoamylene Mixtures

determination of the total number of double bonds in mixtures of 5 components according to both methods has a systematic nature, it can be taken into account by the introduction of a corresponding coefficient (in the case of an isoprene content up to 20 %). It was shown that the values for the total number of double bonds which were once determined according to Rosenmund and once according to Gal'pern practically coincide after the introduction of a correction coefficient. As the method of bromination only makes possible a sum determination for alkenes and dienes, the content of monoolefines can only be determined from the difference between the total number of double bonds and the content of dienes. In the present case an appropriate correction which takes into account the content of isoprene must therefore be applied to the bromimetric results for determining the content of isopentenes. For the determination of isoprene the photometric method according to Robey and Wiese (Reference 17) was employed which is well applicable in the presence of monoolefines, but also of some dienes. The average

Bromometric Method of Determining Unsaturated Hydrocarbons in Isopentane-Isoprene-Isoamylene Mixtures

error of this determination is less than 1 % (absolute). Determination takes 1 1/2 hours, which time can be shortened in series determinations to 20 minutes for one determination. When the concentration of isoprene in isopentane-isoprene-isopentene mixtures has been determined in this manner, the content of isopentenes (P) can be calculated according to the formula $P = a.P'-b$. P is the found total number of double bonds in the mixture, b is the concentration of isoprene in the mixture and a is the correction coefficient. In the method according to Rosenmund $a = 0,96$ and in the method according to Gal'pern $a = 1,04$. All performed tests are exactly described. During the elaboration of this method a short article by Timofeyeva and collaborators (Reference 18) on the same problem was published. In this article a correction coefficient is introduced in the final formula of the calculation which only takes into account the error produced by the inexact bromination of isoprene.

75-1-23/26

Bromometric Methods of Determining Unsaturated Hydrocarbons in Isopentane-Isoprene-Isoamylene Mixtures

There are 1 figure, 5 tables, and 21 references, 15 of which are Slavic.

ASSOCIATION: Institute for Organic Chemistry im. N.D. Zelinskiy, AS USSR, Moscow (Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR, Moskva)

SUBMITTED: April 8, 1957

AVAILABLE: Library of Congress

1. Hydrocarbons - Determination

Card 5/5

5(3)
AUTHORS: Zhukhovitskiy, A. A., Kazanskiy, B. A., Academician, Sterligov, O. D. Turkel'taub, N. M. SOV/2o-123-6-22/5o

TITLE: Chromatographic Analysis of C_5 Hydrocarbon Mixtures (Khromatograficheskiy analiz smesey uglevodorodov sostava C_5)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 6, pp 1o37 - 1o4o (USSR)

ABSTRACT: The purpose of the present paper is the elaboration of a quick and sufficiently simple method of the quantitative analysis of isopentane-isoprene-isoamylene mixtures. Such mixtures are formed on dehydrogenation of isopentane into isoamylenes and isoprene. Their analysis was complicated and required much time (Refs 1-4). The authors successfully used a combination of two chromatographic methods: the partition chromatography (Ref 5) and the "chromathermography" (Ref 6). The methods were worked out on pure individual hydrocarbons and on their artificial mixtures. The universal "chromathermograph" was used for the analysis (Ref 7). Aluminum oxide and diatomite impregnated with dibutyl-phthalate

Card 1/3

(25% by weight) served as sorbents. The readings on the apparatus were automatically recorded by the potentiometer EPP-09 . The results of the experiments with the cooperation of A. I. Karymova and P. S. Pavlova) are given in tables 1 and 2. Figure 1a shows the separation of a complex artificial mixture Nr 18 of C_5-hydrocarbons. The chromatogram shows a distinct separation of all hydrocarbons except isopentane and 3-methylbutene-1. This binary mixture was separated with respect to aluminum oxide using "chromathermography" (Fig 2). The results were of satisfactory accuracy. The deciphering of the initial curve is of considerable importance in analyses of this type. Various methods are used for this purpose (Refs 8,9). There are cases of an incomplete separation of the components of the mixture. A method of calculation for the solution of this question (Ref 11) is suggested. Figures 1a and 1b show the application of "chromatography" to the investigation of the dehydrogenation products of isopentane. The mentioned universal apparatus can also be used for the determination of the purity of hydrocarbons.

Chromatographic Analysis of C_5 Hydrocarbon Mixtures SOV/2o-123-6-22/5o

There are 2 figures, 2 tables, and 11 references, 10 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy, Academy of Sciences USSR) Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut (All-Union Scientific Research Institute for Geological Prospecting of Petroleum)

SUBMITTED: October 20, 1958

Card 3/3

S/595/60/000/000/006/014
E196/E435

AUTHORS: Kazanskiy, B.A., Sterligov, O.D., Belen'kaya, A.P., Kondrat'yeva, G.Ya.

TITLE: Catalytic dehydrogenation of isopentane

SOURCE: Vsesoyuznoye soveshchaniye po khimicheskoy pererabotke neftyanykh uglevodorodov v poluprodukty dlya sinteza volokon i plasticheskikh mass. Baku, 1957. Baku, Izd-vo AN Azerb.SSR, 1960, 207-218

TEXT: Due to the lack of published information, the authors investigated the process of dehydrogenation of isopentane, which yields as the intermediate product isoamylenes, and, as the final product, isoprene, the monomer of synthetic rubber. The chrome-alumina catalyst K-544 was used. This catalyst, developed by M. N. Marushkin of IOKh AN SSSR, proved suitable for dehydrogenation of n-butane and propane; it is highly active chemically and has a high mechanical strength. All experiments were conducted in the following manner: fresh or reactivated catalyst in portions of 20 cm^3 was heated in a quartz tube to the reaction temperature in a current of air. The air was then purged by nitrogen and isopentane was introduced in the tube. The liquid

Card 1/5

reaction products were condensed by cooling with solid carbon dioxide, noncondensibles were collected in a gasholder. The unsaturated hydrocarbons in the condensate were estimated bromometrically by the Rosenmund and Halpern methods; isoprene was separately determined by weighing its adduct with maleic anhydride or colorimetrically by the method of R. F. Robey and H.V.Wiese. The catalyst was regenerated after each run by passing a current of air for one hour at the reaction temperature. Experiments have shown that during hourly working cycles in the temperature range 500 to 575°C and that of space velocities 0.3 to 4.2 hr^{-1}, the activity of the catalyst increased with temperature, reaching a maximum at 550°C, maintained independently of the space velocity in the range 0.7 to 2.6 hr^{-1}. Under those conditions the catalysate from isopentane contained up to 58% of unsaturated hydrocarbons, the yield of the latter being 45 to 49% on total isopentane and 70 to 90% on the decomposed isopentane. The productivity of the catalyst sharply increased with temperature, reaching the optimum value, about 700 g C_5H_{10} / ℓ khr at 550°C and space velocity 2.6 hr^{-1}. Thus 550°C was the best operating point of this catalyst

Card 2/5

Catalytic dehydrogenation ...

The noncondensible gas was found to consist largely of hydrogen with some methane. The liquid products were analysed for the individual unsaturated components by means of gas chromatography and light scattering, the results are given in Table 1. Analytical difficulties in the estimation of the unsaturated components by means of the Raman scattering spectra are discussed. They arise from the fact that the 1640 cm^{-1} line of isoprene is 12 times more intensive than the 1642 cm^{-1} line of 3-methylbutene-1. The masking effect of isoprene is therefore very strong and it tends to affect even the 1651 cm^{-1} line of 2-methylbutene-1. In the chemical determination of total unsaturation of the catalysate the Rosenmund method was found to give high values while the Halpern method gave low values. The correction factors which had to be applied were 0.96 and 1.04 respectively. Academicians N.D.Zelinskiy, A.A.Balandin, B.A.Kazanskiy, Corresponding Member AS USSR N.I.Shuykin, Yu.G.Mamedaliyev as well as V.T.Aleksanyan, Kh.Sterin of Komissiya po spektroskopii AN SSSR (Commission on Spectroscopy AS USSR) and Candidate of Chemical Sciences Head of Gazovaya laboratoriya (Gas Laboratory) of VNIGNI MNP SSSR are mentioned in the paper. There are 9 figures, 6 tables and

Card 3/3

S/595/60/000/000/006/014
E196/E435

Catalytic dehydrogenation ...

4 references: 3 Soviet-bloc and 1 non-Soviet bloc. The reference to an English language publication reads as follows:
Ref.4: Robey R.F., Wiese H.V. Analyt. Chem., 20, 1948 931.

Card 4/5

Catalytic dehydrogenation

S/595/60/000/000/006/014
E196/E455

Unsaturated components in catalysate % W/W

Table 1

Fraction 20 - 38°	500°	525°	550°
Total unsaturation	18.6	41.6	52.2
Isoprene	0.4	1.5	4.2
2-methylbutene-2	10	15	20/25*
2-methylbutene-1	5	15	15/30*
3-methylbutene-1	3	3	5/35*

*The analysis was carried out before separation of dienes in the fraction 20-38°.

Card 5/5

S/079/60/030/011/018/026
B001/B055

AUTHORS: Eydus, Ya. T., Puzitskiy, K. V., and Sterligov, O. D.

TITLE: Acid-catalyzed Synthesis of Esters and Other Derivatives of Carboxylic Acids From Carbon Monoxide, Olefins, and Compounds Capable of Acylation. IV. Carbomethoxylation of Amylenes of Different Structures

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 11, pp. 3799-3802

TEXT: The present publication is an investigation on the carbomethoxylation of the following isomeric amylenes by a method developed by the authors in earlier studies (Refs. 1-4): 1-pentene, 3-methyl 1-butene, 2-methyl 1-butene, and 2-methyl 2-butene. As in the earlier papers (Refs. 1-4), the reaction of the olefin, carbon monoxide and catalyst (concentrated H_2SO_4) in the first stage of the reaction, which involves formation of acyl sulfuric acid as intermediate, proceeded at an initial CO pressure of 80 atm and at temperatures of 20 - 40°C. Addition of methanol to the reaction mixture transforms the acyl sulfuric acid into its methyl ester in the second stage

Acid-catalyzed Synthesis of Esters and Other Derivatives of Carboxylic Acids From Carbon Monoxide, Olefins, and Compounds Capable of Acylation. IV. Carbomethoxylation of Amylenes of Different Structures

S/079/60/030/011/018/026
B001/B055

of the reaction. Methyl esters were obtained from 1-pentene in 54% yield, and from the branched amylenes in 64 - 69% yields, as calculated for initial olefin. 2-Methyl 2-butene gave the highest yield (69%). Methyl-1,1-dimethyl butyrate was obtained as the main reaction product from all isomeric amylenes. The mixture of esters from 1-pentene contained 50.5% of this ester, that from 3-methyl 1-butene 61%, from 2-methyl 1-butene 45%, and from 2-methyl 2-butene 35%. The structures of the remaining reaction products varied according to whether the initial compound had been n-amylene or branched amylene. In analogy to the results obtained with 1-hexene and 1-heptene, 1-pentene yielded methyl-1-ethyl butyrate, as second reaction product, which constituted 27.5% of the ester mixture obtained. Methyl-1-ethyl butyrate was not detected among the reaction products from branched amylenes, which are partly transformed to methyl-trimethyl acetate (4 - 10%), 1,1-dimethyl valeric acid (0 - 5%), and higher acids (30 - 50%). There are 1 figure, 2 tables, and 16 references:

Card 2/3

Acid-catalyzed Synthesis of Esters and Other Derivatives of Carboxylic Acids From Carbon Monoxide, Olefins, and Compounds Capable of Acylation. IV. Carbomethoxylation of Amylenes of Different Structures

S/079/60/030/011/018/026
B001/B055

6 Soviet, 4 US, 1 British, 3 German, 1 Italian, and 1 French.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry of the Academy of Sciences USSR)

SUBMITTED: December 18, 1959

Card 3/3

STERIN, Kh.Ye.; ALEKSANYAN, V.T.; UKHOLIN, S.A.; BRAGIN, O.V.; GAVRILOVA, A.Ye.; ZOTOVA, S.V.; LIBERMAN, A.L.; MIKHAYLOVA, Ye.A. SMIRNOVA, E.N.; STERLIGOV, O.D.; KAZANSKIY, B.A.

Raman spectra of some tri- and tetraalkylbenzenes and condensed aromatic hydrocarbons. Izv. AN SSSR. Otd.khim.nauk no.8:1444-1450 Ag '61. (MIRA 14:8)

1. Komissiya po spektroskopii AN SSSR i Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
(Benzene--Spectra)
(Hydrocarbons--Spectra)

25393 S/080/61/034/002/013/025
A057/A129

S 3400

AUTHORS: Pumitskiy, K.V., Sterligov, O.D., Belen'kaya, A.P., Eydus, Ya.T.

TITLE: Preparation of carboxylic acid esters from amylene mixtures

PERIODICAL: Zhurnal Prikladnoy Khimii, v 34, no 2, 1961, 366-369

TEXT: Carboxylic acid methyl esters were obtained with a 55.63% yield by carbomethoxylation of amylene mixtures with different structure. The main product is methyl ester of α,α-dimethylbutyric acid, i.e., a carboxylic acid ester with a quaternary carbon atom in α-position. Amylenes are important for the manufacture of high-octane components in gasoline or for detergents. In a previous paper (Ref 1: ZhOKh, 30, 3799 (1960)) the present authors investigated syntheses of carboxylic acid esters from single amylenes with various structures using H_2SO_4, CO and CH_3OH and observed that the main reaction product is always the methyl ester of α,α-di-

Card 1/5

Preparation of carboxylic acid esters ...

methylbutyric acid. Thus the latter was also to be expected as main reaction product from a mixture of amylenes. In the present experiments catalyzates of the dehydrogenation of iso-pentane and n-pentane, as well as the pentane-amylene fraction of thermal cracking products of gas oil (Tab.1) were carboxymethylated. Reactions and identification of the obtained esters were carried out in procedures described already in the previous paper (Ref 3). Conditions and the obtained results were presented in Table 2,3. There is 1 figure, 3 tables and 14 references: 6 Soviet-bloc and 8 non-Soviet-bloc. Three of the English-language references read as follows: F.C. Whitmore, F.A. Karnatz, J. Am. Chem. Soc., 60, 2533 (1938); D.V.N. Hardy, J. Chem. Soc., 464 (1938), J.M. Holtert, J. Am. Pharm. Assoc. Sci. Ed., 35, 315 (1946).

SUBMITTED: March 14, 1960

Card 2/5

STERLIGOV, O.D.; ROZHKOVA, M.I.

Continuous isomerization of 2-methyl-2-butene and 2-methyl-1-butene in to 3-methyl-1-butene. Neftekhimiia 2 no.3:288-290 My-Je '62. (MIRA 15:8)

1. Institut organicheskoy khimii AN SSSR imeni Zelinskogo.
(Butene) (Isomerization)

S/204/62/002/004/003/019
E071/E433

AUTHORS: Kazanskiy, B.A., Dorogochinskiy, A.Z., Sterligov, O.D., Lyuter, A.V., Dmitriyevskiy, M.L., Nazarov, P.S.

TITLE: Dehydrogenation of isopentane into isoamylenes on an alumochromopotassium catalyst

PERIODICAL: Neftekhimiya, v.2, no.4, 1962, 448-456

TEXT: A systematic study of the process of dehydrogenation of isopentane into isoamylenes under conditions of a stationary and moving layer of granulated catalyst K-544 was carried out on experimental installations of Groz NII. Tests on the stationary layer were carried out on a laboratory and an enlarged installation. The reactors with a stationary layer of the catalyst were of the capacity of 40 and 500 cm3 respectively. Tests in the moving layer were made in a co-current continuous pilot plant with a reactor (4 litres) and a regenerator (4.7 litres). The volume of the catalyst - 35 litres, throughput - about 100 litres/day, the velocity of circulation of the catalyst - up to 16 litres/hour. The analyses of the reaction products were made by chromatographic and other chemical methods. The influence of the temperature, volume velocity and rate of recirculation of

ASSO [illegible] Organic
[illegible].Zelinskiy) GrozNII

Card 1/2

Card

STERLIGOV, O.D.; BELEN'KAYA, A.P.

Effect of the composition of aluminum-chromium-potassium oxide catalysts on their activity in dehydrogenation of isopentane. Izv. AN SSSR. Otd.khim.nauk no.5:800-805 My '62. (MIRA 15:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Catalysts) (Dehydrogenation) (Butane)

GONIKBERG, M.G.; GAVRILOVA, A.Ye.; STERLIGOV, O.D.; ROZHKOVA, M.I.

Thermal polymerization of pentenes at high pressures. Izv.AN SSSR. Otd.khim.nauk no.8:1458-1463 Ag '62. (MIRA 15:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Pentene) (Polymerization)

KAZANSKIY, B.A.; DOROGOCHINSKIY, A.Z.; SERLIGOV, O.D.; LYUTER, A.V.; DMITRIYEVSKIY, M.L.; NAZAROVA, M.P.; REBIVIASHVILI, A.N.

Studying the dehydrogenation of isopentane on K-544 and K-5 finely divided catalysts. Trudy GrozNII no. 15:241-253 '63. (MIRA 17:5)

Varushkin device for determining the mechanical strength of granules.
Kin. i kat. 5 no.3:559-56[illegible] (MIRA 17:11)

1. Institut organicheskoy khimii AN SSSR i Groznenskiy neftyanoy nauchno-issledovatel'skiy institut.

STERLIGOV, O.D.; YELISEYEV, N.A.

Dehydrogenation of isopentane in reactors of various ma[illegible]
Neftekhimia 4 no.3:391-398 My-Je '64.

Development of an alumina-chrome-potassium catalyst in the dehydrogenation of isopentane. Ibid.:399-405

(MIRA 18:2)

1. Institut organicheskoy khimii AN SSSR im. N.D.Zelinskogo.

[illegible], [illegible]; [illegible], N.A.

Development of an aluminum-chrome-potassium catalyst in the dehydrogenation of isopentane: effect of alkali content. Neftekhimiia 4 no.4: 540-546 Jl-Ag '64. (MIRA 17:10)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

L 34004-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AP5006073 S/0204/65/005/001/0010/0016

22
20
B

AUTHOR: Sterligov, O. D.; Yeliseyev, N. A.

TITLE: Dehydrogenation of isopentane on alumina-chromia-potassium oxide catalysts. The effect of the chromium oxide content in the catalyst

SOURCE: Neftekhimiya, v. 5, no. 1, 1965, 10-16

TOPIC TAGS: isopentane dehydrogenation, catalytic dehydrogenation, alumina catalyst, chromium oxide catalyst, hydrocarbon isomerization

ABSTRACT: The effect of Cr_2O_3 contents of 1-40 wt.% in K_2O-activated alumina-chromia catalysts on the dehydrogenation and skeletal isomerization of isopentane was experimentally studied as part of research on the activity and regeneration of such catalysts. Development of catalyst activity with time and formation of isopentanes, isoprene, normal C_5-hydrocarbons and of C_1-C_4 hydrocarbons was measured at 550C, atmospheric pressure and a flow rate of 1/hr. over a constant volume (25 cc) of catalyst, whose bulk density increased and whose specific surface decreased approximately two-fold with increasing Cr_2O_3 concentration from 1 to 30%. The fresh and oxidized catalysts reached maximum activity most rapidly at a 20% Cr_2O_3 content, maximum yields of isopentanes (44.7 wt.%) and normal C_5

Card 1/2

L 34004-65
ACCESSION NR: AP5006073

hydrocarbons were obtained at 15 wt.% Cr_2O_3, and the maximum amount of isoprene (2.1 wt.%) was formed over a catalyst containing 10% Cr_2O_3. Coking was most intensive with a catalyst containing 20% Cr_2O_3, whereas the yield of gaseous products was little affected by the chromium content. The rate of development to maximum activity was also shown to increase with the hydration of the catalyst surface. The analysis of aqueous catalyst extracts indicated the presence of CrO_3 in oxidized catalysts and the formation of basic and acidic active centers during the hydrogenation process, skeletal isomerization proceeding primarily on acid centers. "The authors thank V. I. Bogomolov for determining the specific catalyst surface area." Orig. art. has: 2 tables, 4 figures and 2 formulas.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo, AN SSSR (Organic chemistry institute, AN SSSR)

SUBMITTED: 14May64 ENCL: 00 SUB CODE: OC

NO REF SOV: 010 OTHER: 009

Card 2/2

KHODAKOV, Yu.S.; MINACHEV, Kh.M.; STERLIGOV, O.D.

Kinetics of the catalytic dehydrogenation of butane to butylenes. Dokl. AN SSSR 165 no.2:344-346 N '65.
(MIRA 18:11)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
Submitted April 12, 1965.

[illegible], G.D.; [illegible], N.A.

Effect of the nature of aluminum oxide on the properties of an aluminum-chromium-potassium oxide catalyst for isopentane dehydrogenation. Neftekhimiia 5 no.6:809-814 N-D '65. (MIRA 19:2)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR. Submitted Nov. 2, 1964.

Efforts of a collective brought success. Prof.-tekh. obr. 20 no.5:9 My '63. (MIRA 16:7)

1. Direktor Ryazanskogo gorodskogo professional'no-tekhnicheskogo uchilishcha No.1.
(Technical education)

AB.AMOVICH, A.D., kand. tekhn. nauk; ANTONOV, M.F., kand. tekhn. nauk; KAPLAN, G.A., inzh.-ekonomist; LEVIN, S.M., inzh.-zemleustroitel'; LISTENGURT, F.M., kand. geogr. nauk; SAMOYLOV, Ya.V., kand. tekhn. nauk; SMOLYAR, I.M., kand. arkhitek.; SOLOVYENKO, K.A., kand. arkht.; STERLIGOV, V.D., kand. arkht.; FALEYEV, V.G., inzh.; Prinimali uchastiye: BUTUZOVA, V.P.; GLABINA, N.K.; GOL'DSHTEYN, A.M.; DEMYANOVSKIY, V.S.; KAPLAN, G.L.; FEDOTOVA, N.A.; TSEYTLIN, G.I.; BURLAKOV, N.Ya., red.; KOMPANEYETS, Z.K., red. izd-va; GOLOVKINA, A.A., tekhn. red.

[Regional planning of economic administrative regions, industrial regions and centers; planning guide]Raionnaia planirovka ekonomicheskikh administrativnykh raionov, promyshlennykh raionov i uzlov; rukovodstvo po proektirovaniiu. Pod red.N.IA.Burlakova. Moskva, Gosstroiizdat, 1962. 266 p. (MIRA 15:10)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut gradostroitel'stva i raionnoi planirovki. 2. Zamestitel' direktora po nauchnoy rabote Nauchno-issledovatel'skogo instituta gradostroitel'stva i rayonnoy planirovki (for Burlakov). 3. Nauchno-issledovatel'skiy institut gradostroitel'stva i rayonnoy planirovki (for Butuzova, Glabina, Gol'dshteyn, Demyanovskiy, Kaplan, Fedotova, TSeytlin).
(Regional planning)

STERLIGOV, V.F.

Questions and problems on the topic "Properties of solid bodies." Fiz. v shkole 13 no.5:77 S-O '53. (MLRA 6:8)

1. 569-ya srednyaya shkola, Moscow. (Solids)

SERGEYEV, Ivan Ivanovich; SHKLYARSKIY, Mikhail Valentinovich; STERLIGOV, V.L., inzh.-kapitan, red.; BABOCHKIN, A.T., tekhn.red.

[Textbook for electricians] Uchebnoe posobie elektromekhanika. Moskva, Voen.izd-vo M-va obor. SSSR, 1958. 284 p. (MIRA 12:3)
(Electric engineering)

PETROV, Viktor Pavlovich; SOCHIVKO, Arkadiy Arkad'yevich; STERLIGOV, V.L., inzh.-mayor, red.; ZUDINA, M.P., tekhn.red.

[Rocket guidance] Upravlenie raketami. Moskva, Voen.izd-vo M-va obor.SSSR, 1959. 207 p. (MIRA 13:2)
(Guided missiles)

DIKIY, Aleksandr Danilovich, kand.tekhn.nauk; SOLDATOV, Ivan Andreyevich. Prinimal uchastiye KHVATOVKER, I.Ye., kand.tekhn.nauk. STERLIGOV, V.L., inzh.-mayor, red.; SRIBNIS, N.V., tekhn.red.

[Radio transmitting devices] Peredatchiki radiotekhnicheskikh sredstv. Moskva, Voen.izd-vo M-va obor.SSSR, 1960. 367 p. (MIRA 13:7)

(Radio, Shortwave--Transmitters and transmission)

PARFENOV, Vasiliy Aleksandrovich, kand.tekhn.nauk; STERLIGOV, V.L., inzh.-mayor, red.; ZUDINA, M.P., tekhn.red.

[Returning from space] Vozvrashchenie iz kosmosa. Moskva, Voen.izd-vo M-va obor.SSSR, 1961. 67 p. (MIRA 14:6)
(Space flight)

VISHNEVETSKIY, Aleksandr Il'ich; SERGIYENKO, Ivan Stepanovich; STERLIGOV, V.L., inzhener-mayor, red.; KRASAVINA, A.M., tekhn. red.

[Paratetron; new switching elements]Parametron; novye perekliuchaiushchie elementy. Moskva, Voen. izd-vo M-va obor. SSSR, 1961. 66 p. (MIRA 14:8)

(Electronic digital computers) (Switching theory)

LYASHENKO, Ivan Dmitriyevich; STELLIGOV, V.L., red.; MASLOVA, N.Ya., tekhn. red.

[Radio navigation methods]Radionavigatsiia. Moskva, Voenizdat, 1962. 75 p. (MIRA 15:8)
(Radio in navigation)

SMIRNOV, Gennadiy Dmitriyevich; GORBACHEV, Viktor Petrovich;
STERLIGOV, V.L., red.; KRASAVINA, A.M., tekhn. red.

[Radar systems with active response] Radiolokatsionnye sistemy s aktivnym otvetom. Moskva, Voenizdat, 1962. 113 p.
(MIRA 15:5)

(Radar)

MARSUKOV, Filipp Ivanovich; MAKSIMOV, Matvey Vasil'yevich; STERLIGOV, V.L., red.; CHAPAYEVA, R.I., tekhn. red.

[Radio-telemetry]Radiotelemetriia. Moskva, Voenizdat, 1962. 183 p. (MIRA 15:8)
(Telemetering)

POKROVSKIY, G.I.; SLABKIY, L.I.; STERLIGOV, V.L., red.;
CHAPAYEVA, R.I., tekhn. red.

[Physics in technology] Fizika v tekhnike. Moskva, Voenizdat, 1963. 83 p. (MIRA 16:11)
(Physics) (Technology)

YUR'YEV, E.Yu.; STERLIGOV, V.L., red.; MEDNIKOVA, A.N., tekhn.red.

[Radio communications with space rockets] Radiosviaz' s kosmicheskimi raketami. Moskva, Voenizdat, 1963. 77 p.

KUROTKIN, Vladimir Ivanovich, inzh.-podpolkovnik; STERLIGOV, Vladimir Leonidovich, inzh.-mayor; SHIRYAYEV, N.P., inzh.-mayor, red.; KUZ'MIN, I.F., tekhn. red.

[Homing guidance of rockets] Samonavedenie raket. Moskva, Voenizdat, 1963. 87 p. (MIRA 16:9)
(Guided missiles--Guidance systems)

POLISAR, G.L.; STERLIGOV, V.L., red.; SOLOMONIK, R.L., tekhn. red.

[Modeling]Modelirovanie. Moskva, Voenizdat, 1963. 119 p.
(MIRA 16:10)
(Electromechanical analogies) (Electronic computers)
(Similitude,Theory of)

PETROV, Viktor Pavlovich; SOCHIVKO, Arkadiy Arkad'yevich; STERLIGOV, V.L., red.; PERETRUKHINA, G.F., red.; KOKINA, N.N., tekhn. red.

[Rocket control] Upravlenie raketami. Izd.2., ispr. i dop. Moskva, Voenizdat, 1963. 263 p. (MIRA 16:4)
(Rockets (Ordnance))--Controls)

[illegible], Vladimir Mikhaylovich; Gaydayev, V.I., red.

[Lasers in outer space, on the earth, and under water] Lazery v kosmose, na zemle i pod vodoi. Moskva, Voenizdat, 1964. 102 p. (MIRA 17:6)

CHERNYSH, G. I.; STERLIGOV, V. V.; VAYNSHTEYN, I. L.; BAZHENOV, M. M.

Intensifying the rate of open-hearth smelting with the help of a new fuel burning device. Izv.vys. ucheb. zav.; chern.met. 7 no. 4:146-150 '64. (MIRA 17:5)

1. Sibirskiy metallurgicheskiy institut.

1. STERLIGOVA, M.

2. USSR (600)

7. "Rays that Kill Microbes. (Bactericidal Lamps and Their Application)", Tekhnika Molodezhi, No. 7, 1951, p 19.

9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132, Unclassified

ST[illegible], [illegible].

Lighting

Conversation about illuminants. Tekh.molod., No. 2, 1952.

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, June 1952. Uncl.

STEPANOVA, M.

Polarization (Light)

Transformation of light. Tekh. molod. 20 No. 4, 195?

Monthly List of Russian Accessions, Library of Congress, July 1952. UNCLASSIFIED.

1. STERLIGOVA, Eng. M.

2. USSR (600)

4. Refraction

7. Refraction of light. Tekh. molod. 20 no. 12, 1952.

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

STEKLIGOVA, M., inzhener.

Interference of light. Tekh.molod. 22 no.1:15-16 Ja '54. (MLRA 7:1)
(Interference (Light)

Sterligova, M., inzhener.

Daylight without the sun. Tekh.mol. 22 no.8:30-31 Ag '54.(MLRA 7:8)
(Fluorescent lighting)

STERLIGOVA, M. inzhener.

Rectangular picture tube. Tekh.mol.24 no.8:14-16,39 Ag '56.
(Television--Picture tubes) (MLRA 9:9)

USSR

Cultivated Plants. Potatoes. Vegetables. Cucurbits.

Ref Zhur-Biologiya, No. 9, 1959, No. 20343

Sterligova, T.V.

Petrozavodsk Univ.

The Influence of Copper and Manganese on the Growth, Development and Yield of Pumpkins and Tomatoes.

Sb. nauchn. rabot stud. Petrozavodskogo un-ta, 1956, vyp. 3, 126-145

The results are given of experiments conducted at the Chair of Plant Physiology in 1952 and 1953. The experimental patch had a mineral soil; the experiments were made against a background of fertilization, where full mineral fertilizer (NPK) and manure were added to the soil. The fertilization of the pumpkins and tomatoes with micronutrients was achieved by various methods: application of the micronutrients directly into the soil,

CARD : 1/3

CHERNIGOVSKIY, Ye., inzh.; STERLIK, I., inzh.

Electric heaters for oil dispensers. Avt.transp. 40 no.9:25-26 S '62. (MIRA 15:9)

1. Gruzovoy avtopark No.25 Glavkiyevavtotransa.
(Electric heating)

TSFAS, B.S., dotsent, kand.tekhn.nauk; STERLIKOV, F.F., student

Increasing the range and precision of movement regulation in universal machine tools used in lot production. Sbor.dokl. Stud.nauch.ob-va Fak.mekh.sel'.Kuib.sel'khoz.inst.no.1:51-60 '62. (MIRA 17:5)

1. Kuybyshevskiy sel'skokhozyaystvennyy institut.

STERLIKOV, F.F., stucent; YEREMIN, A.V., kand.tekhn.nauk, starshiy prepodavatel', nauchnyy rukovoditel'raboty

Self-centering hinged dovetail remover. Sbor.dokl.Stud.nauch. ob-va Fak.mekh.sel'. Kuib.sel'khoz.inst. no. 1:142-146 '62. (MIRA 17:5)

1. Kuybyshevskiy sel'skokhozyaystvennyy institut.

STERLIKOV, I.I., master kolodtsev blyuminga

Operation of regenerator soaking pits for blooming mills with liquid slag removal. Metallurg 5 no. 12:26-29 D '60. (MIRA 13:11)

1. Magnitogorskiy metallurgicheskiy kombinat.
(Rolling mills--Equipment and supplies)
(Furnaces, Heating)

L 41032-65 EWT(d)/EWT(m)/EWP(w)/T-2 EM S/0286/65/000/006/0113/0113

ACCESSION NR: AP5008577

AUTHORS: Zuyev, M. A.; Razin, O. M.; Krylov, V. M.; Volkov, A. F.; Timoshin, Ye. P.; Storlikov, V. P.; Gozulov, S. A.; Lemasov, V. B.; Kirolyubov, G. P.

TITLE: Test stand for creating impact overloads. Class 62, No. 169407

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 6, 1965, 113

TOPIC TAGS: impact testing

ABSTRACT: This Author Certificate presents a test stand for creating impact overloads. The stand contains a truss with controlling cables, a hoisting device, a platform for the investigated object, a cable with a suspension system, a cut-off mechanism, a braking mechanism, shock absorbers, and instruments for measuring the platform drop rate. To increase the safety of the experiment and to exclude the effect of the prescribed height on the free fall of the platform, the stand is provided with a contactless mechanism for setting the height (see Fig. 1 on the Enclosure). It consists of a transmitting selsyn connected by a flexible shaft to the shaft of an electric tackle drum, a receiving selsyn placed in the frame of the mechanism, and a mechanism reductor. A setting indicator with a knob and contact, a sliding indicator with a contact, a height indicator scale,

Card 1/3

L 41032-65
ACCESSION NR: AP5008577

and a stop relay are connected in the magnetic starter circuit of the electric tackle. Orig. art. has: 1 diagram.

ASSOCIATION: none

SUBMITTED: 02Jan64 ENCL: 01 SUB CODE: ME

NO REF SOV: 000 OTHER: 000

Card 2/3

L 38265-65 EWT(1)/EPR/EWA(m)-2/EWA(h) Ps-4/Peb WW
ACCESSION NR: AP5007450 S/0286/65/000/004/0072/0073

AUTHORS: Sterlikov, V. P.; Roy, E. V.; Chuchkin, V. G.; Rozhdestvenskiy, V. I.

TITLE: Thermal flowmeter for small flow rates of liquid. Class 42, No. 168484

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 72-73

TOPIC TAGS: liquid flowmeter

ABSTRACT: This Author Certificate presents a thermal flowmeter for small flow rates of liquid. The device contains a thermocouple with two junctions as the sensing element, a measuring tube passing through the two-chambered case of a thermostated detector, and two thermostats maintaining a temperature drop between the detector chambers. To increase the accuracy of measurement, the thermocouple is placed along the axis of the measuring tube. Both junctions are placed in one detector chamber (see Fig. 1 on the Enclosure). To increase the sensitivity of the device by creating an equilibrium temperature field in the region of the detector case, it is provided with additional chambers inside of which are mounted perforated tubes. Orig. art. has: 1 diagram.

ASSOCIATION: none
SUBMITTED: 29Nov63 ENCL. 01 SUB CODE: IE, ME
NO REF SOV: 000 OTHER: 000

Card 1/1

BELKOV, S.F.; STERLIKOV, V.V.

Making large separators by means of liquid metal drop forging.
Lit.proizv. no.2:8-9 F '60. (MIRA 13:5)
(Die casting) (Forging)

Geophys (1)

Fuel Abst.
Vol 14 No. 4
October 1953
Natural Solid
Fuels: Sources and
Properties

3012. NEW DATA ON STRATIGRAPHY ON JURASSIC DEPOSITS OF DONETS BASIN AND REGION OF ITS SOUTHERN DIP. Sterlin, B. P. (Dokl. Akad, Nauk SSSR (Rep. Acad. Sci., U.S.S.R.), 11 Apr. 1953, vol. 90, (5), 929-932). (L).

STERLIN, B.P.

STERLIN, B.P.; BELYANKIN, D.S.' akademik.

Boundary of the Middle and Upper Jurassic in the Donets Basin. Dokl.AN SSSR 90 no.5:867-868 Je '53. (MLRA 6:5)

1. Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologo-razvedochnyy institut (for Sterlin). 2. Akademiya nauk SSSR (for Belyankin).
(Donets Basin--Geology, Stratigraphic)

STERLIN, B.P.

MIGACHEVA, Ye.Ye.; STERLIN, B.P.; OBRUCHEV, V.A., akademik.

Paleogeography of the Middle Sarmatian period in Moldavia. Dokl.AN SSSR 91 no.3:617-619 Jl '53. (MLRA 6:7)

1. Akademiya nauk SSSR (for Obruchev).
(Moldavia--Paleogeography) (Paleogeography--Moldavia)

STERLIN, V. P.

USSR/Geology

Card : 1/1

Authors : Sterlin, V. P.

Title : Boundary between Triassic and Jurassic formations in the Don Basin

Periodical : Dokl. An SSSR, 96, Ed. 4, 807 - 808, June 1954

Abstract : The changes in the formation of deposits in the Don Basin territory, which took place during the Jurassic and Triassic periods, and are evident from the conversion of the light colored Triassic deposits to the dark colored Jurassic deposits, are discussed. Seven references.

Institution : Ukrainian Section of the All-Union Petroleum Scientific-Research Geological Institute

Presented by: Academician S. I. Mironov, March 26, 1954

STERLIN, B. P.

USSR/ Geology

Card 1/1 : Pub. 22 - 35/48

Authors : Sterlin, B. P.

Title : Nature of the joining of the Dnieper-Don depression and the Don folding area

Periodical : Dok. AN SSSR 97/5, 891-893, August 11, 1954

Abstract : Stratigraphic and tectonic data on the joining of the Dnieper-Don depression and the Don River folding area in the Ukr-SSR. Six USSR references (1937-1953). Diagram.

Institution : All-Union Scientific Research Petroleum Geological-Exploration Institute, Ukrainian Branch.

Presented by : Academician S. I. Mironov, April 10, 1954

STERLIN, B.P.

Conditions of formation of the Upper Bath deposits in the northwestern Donets Basin. Dokl.AN SSSR 104 no.5:765-766 O '55.
(MLRA 9:2)
1.Ukrainskoye otdeleniya vsesoyuznogo neftyanogo nauchno-issledovatel'skogo geologo-razvedochnogo instituta. Predstavleno akademikom S.I.Mironovym.
(Donets Basin--Geology, Stratigraphic)